Math 140 - Trigonometry – 3 Credit hours
Course Syllabus
Semester: Spring 2009

Class Meetings:
      Day/Time:
      Course Site:

Instructor:

MISSION STATEMENT

Southern University at Shreveport (SUSLA), an autonomous unit of the Southern University System A & M System, seeks to provide a quality education for its students, while being committed to the total community. This Institution awards certificates and associate degrees, prepares students for careers in technical and occupational fields, and offers courses and programs that are transferable to other colleges and universities. Dedicated to excellence in instruction and community service, this open enrollment institution promotes cultural diversity, provides developmental and continuing education, and seeks partnerships with business and industry. The University intends that all individuals should have the opportunity to receive educational experiences and related services, which are compatible with their varied interests, academic abilities, achievements, family backgrounds, motivations, needs, and goals.

Catalog description
      Math 140 - Plane Trigonometry – 3 Hrs
      Prerequisite: Math 124 or higher
      This course is a study of angles and their measure, trigonometric functions, radian measure, fundamental identities, solution of trigonometric equations, inverse functions, complex numbers and polar coordinates.

Textbook and Course Materials

      COURSEID:
      Required MyMathLab:
1. **Mymathlab code can be purchased through the Southern University bookstore or**
2. **The mymathlab code can be purchased online at**
      www.coursecompass.com

STUDENT LEARNING OUTCOMES
General Education:

The graduate from Southern University at Shreveport should be able to:

1. Demonstrate proficiency in written and oral communication by composing and presenting structured texts in a variety of oral and written forms according to purpose, audience, and occasion with implementation of thesis, supporting details, and idea development.
2. Solve problems by interpreting, analyzing, evaluating and applying known information received from statistical and other data, past experience, problem- solving techniques, inference, the scientific method, mathematical equations, graphics, etc., to make decisions, judgments, and predictions, constructing well-supported and sustained arguments to justify conclusions.
3. Effectively utilize various modes and media using technology such as computers, computer software applications, the Internet, and other technology to produce documentation, data and graphical presentations appropriate to various academic and professional arenas/venues.
4. Conduct research, synthesize and evaluate information to develop arguments and to organize evidence into a presentation using proper discipline-specific formats to cite and document primary and secondary sources.
5. Demonstrate professional and ethical behavior as required by discipline-specific codes of conduct and as needed in a diverse and global workforce or in the articulation to a four-year college or university program.

Student Learning Outcomes:
Upon completion of this course, the student will:

1. Solve problems by developing analytic and numerical techniques for attacking some of the problems that may arise in the application of trigonometry problems.
2. Students will understand the language, fundamental concepts, and standard theorems of trigonometry so that they will be prepared to read appropriate mathematical literature with understanding.
3. Student will define initial and terminal sides of an angle, positive and negative angles, and standard position of an angle.
4. Convert the measure of angles from radians to degrees and from degrees to radian.
5. Determine the trigonometric functions of an acute angle.
6. Determine the trigonometric functions of angles and reference angles with measures of 30°, 45°, and 60°.
7. Prove identities involving trigonometric functions.
8. Use properties of right triangles, the Law of Sins and Law of Cosines to solve triangles and word problem involving applications of triangles.

9. Solve trigonometric equations.
10. Graph trigonometric functions.

Course Outline

1. **The Trigonometric Functions.**
   Basic Concepts
   Definitions of the Trigonometric Functions
   Using the Definitions of the Trigonometric Functions
2. **Acute Angles and Right Triangles**
   Trigonometric Functions of Acute Angles
   Trigonometric Functions of Non-Acute Angle
   Finding Trigonometric Function Values Using a Calculator
   Solving Right Triangles
3. **Radian Measure and the Circular Functions**
   Radian Measure
   Applications of Radian Measure
   Circular Functions of Real Numbers
4. **Graphs of the Circular Functions**
   Graphs of the Sine and Cosine Functions
   Translations of the Graphs of the Sine and Cosine Functions
   Graphs of the Other Circular Functions
5. **Trigonometric Identities**
   Fundamental Identities
   Verifying Trigonometric Identities
   Sum and Difference Identities for Cosine
   Sum and Difference Identities for Sine and Tangent
   Double-Angle Identities
   Half-Angle Identities
6. **Inverse Trigonometric Functions and Trigonometric Equations**
   Inverse Trigonometric Functions
   Trigonometric Equations I

GRADING

Final grades will be determined by the number of points a student earns from quizzes, homework and examinations will determine final grades.

The percentage scale is as follows:

90% - 100% = A

80% - 89% = B

70% - 79% = C

60% - 69% = D

0% - 59% = F

ATTENDANCE

Three unexcused absentees are allowed. An absentee can only be removed when proper excuses have been presented and appropriate make-up work has been done. The student is referred to "Class Attendance Regulations" in the University Catalog.

STUDENT RESPONSIBILITIES

A. Each student must have a textbook and/or material.

B. Each student must keep a notebook.

C. Each student must attend class on time.

D. Assignments must be clearly and neatly written on one side of paper only.

E. Do not turn in assignments on paper with jagged edges.

A conference schedule as well as a Tutorial Laboratory schedule will be posted.

Paid Receipt

Officially Enrolled: A student is required to show the instructor a paid receipt on the first day of class. A student is not officially enrolled in class unless he or she has a paid class schedule. It is the student's responsibility to ensure that all steps of the registration process have been completed before attending class.

Disabilities Policy

Southern University at Shreveport, Louisiana is in compliance with the regulations of the American with Disabilities ACT. The coordinator for ADA is assigned to the Office of Student Affairs. Anyone with special needs should contact the Vocational and Placement Center located in the Counseling Center in the Fine Arts building.

Academic Dishonesty Policy

Plagiarism, cheating, and any other form of academic dishonesty are prohibited. Any student who is caught cheating on a test, exam, quiz or assignment will be given a grade of zero (0) for the specific evaluation. Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that a student's submitted work, examinations, reports, and projects must be that of the student's own work.